

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
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M006 Ornate Shrew *Sorex ornatus*
Family: Soricidae Order: Insectivora Class: Mammalia

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The ornate shrew is common in the southern two-thirds of California west of the Sierra Nevada, from Mendocino and Butte cos. south to the Mexican border. Its optimum habitats are valley foothill and montane riparian, but it also occurs in a wide variety of woodland, chaparral, grassland, and emergent wetland habitats. The ornate shrew is generally found below 1875 m (6000 ft). There are two reported specimens from Santa Catalina Island (Owen and Hoffmann 1983).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds on insects and other invertebrates under logs, rocks, low cover, dense vegetation and litter. (Hoffmann 1999).

Cover: Uses stumps, logs, and litter.

Reproduction: Nests in wood, shrubs, and burrows. There is one report of nesting in a woodrat nest (Vestal 1938).

Water: No data found, but occurs in dry habitats, so the species may not require water.

Pattern: Is most abundant in riparian habitat, though it is widespread in terms of occupied habitats. Prefers moist microhabitats with low, dense vegetation for protection from the elements (Hoffmann 1999).

SPECIES LIFE HISTORY

Activity Patterns: Yearlong activity. Most surface activity is nocturnal. Pearson (1959) reported two peaks of activity, one at dusk and another later at night.

Seasonal Movements/Migration: No data found.

Home Range: No data found.

Territory: No data found.

Reproduction: May breed somewhat later than *S. vagrans*. Most pregnancies occur in March and April but may take place from February through October. Gestation lasts about 21 days and the litter size is 4-6. Few females produce more than one litter in a year; most individuals do not live to breed a second year (Rudd 1955a, Hoffmann 1999).

Niche: This small insectivore occurs with other shrews, such as *S. vagrans* and *S. trowbridgii*, but its relations with these species are unknown. It is able to occupy drier upland habitats than other shrews. Predators include owls (Von Bloeker 1937).

Comments: Four subspecies of the ornate shrew have restricted distributions and are California Species of Special Concern (Williams 1986). *S. o. sinuosus* occurs only in San Pablo and Suisun bays. It is both less abundant and more restricted in distribution than the endangered salt-marsh harvest mouse. It prefers the dense, low-lying cover of salicornia. Marshes and sloughs around the perimeter of Buena Vista Lake in Kern Co. are the known location for *S. o. relictus*. This subspecies also may occur in the Tulare basin and at Kern and Pixley National Wildlife refuges, but its status is unknown. The coastal marshes of Los Angeles and Ventura cos., from Pt. Mugu to Anaheim and Newport Beach, constitute the known range of *S. o. salicornicus*, the status of which is unknown. The Santa Catalina shrew, *S. o. willetti*, is known from two specimens obtained on Santa Catalina Island, one by Von Bloeker (1967) and one by Williams (1986). It probably occurs in larger, stream-bearing canyons of valley foothill riparian habitat. *S. v. sinuosus* formerly was considered a full species, *S. sinuosus*.

REFERENCES

- Findley, J. S. 1955. Speciation of the wandering shrew. Univ. Kans. Publ., Mus. Nat. Hist. 9:1-68.
- Grinnell, J. 1908. The biota of the San Bernardino Mountains. Univ. Calif. Publ. Zool. 5:1-170.
- Grinnell, J., and H. S. Swarth. 1913. An account of the birds and mammals of the San Jacinto area of southern California. Univ. Calif. Publ. Zool. 10:197-406.
- Hoffmann, R. S. 1999. Ornate shrew: *Sorex ornatus*. Pages 35-36 in Wilson, D. E. and S. Ruff, editors. The Smithsonian book of North American mammals. Smithsonian Institution Press, Washington and London. 750pp.
- Jackson, H. H. T. 1928. A taxonomic review of the American long-tailed shrews (genera *Sorex* and *Microsorex*). U.S. Dep. Agric., North Amer. Fauna No. 51. 238pp.
- Junge, J. A., and R. S. Hoffmann. 1981. An annotated key to the long-tailed shrews (Genus *Sorex*) of the United States and Canada, with notes on Middle American *Sorex*. Univ. Kans., Mus. Nat. Hist. Occas. Pap. No. 94. 48pp.
- Kolb, J. A., and M. White. 1974. Small mammals of the San Bernardino Mountains, California. Southwest. Nat. 19:112-114.
- Owen, J. G., and R. S. Hoffmann. 1983. *Sorex ornatus*. Mammal. Species No. 212. 5pp.
- Pearson, O. P. 1959. A traffic survey of *Microtus-Reithrodontomys* runways. J. Mammal. 40:169-180.
- Rudd, R. L. 1955a. Age, sex, and weight comparisons in three species of shrews. J. Mammal. 36:323-339.
- Rudd, R. L. 1955b. Population variation and hybridization in some Californian shrews. Syst. Zool. 4:21-34.
- Vestal, E. H. 1938. Biotic relations of the woodrat (*Neotoma fuscipes*) in the Berkeley Hills. J. Mammal. 19:1-36.
- Von Bloeker, J. C., Jr. 1937. Mammal remains from detritus of raptorial birds in California. J. Mammal. 18:360-361.
- Von Bloeker, J. C., Jr. 1967. The land mammals of the southern California Islands. Pages 245-263 in R. N. Philbrick, ed. Proc. Sympos. on the Biology of the California Islands. Santa Barbara Botanic Garden, Santa Barbara. 363pp.
- Williams, D. F. 1986. Mammalian species of special concern in California. Calif. Dept. Fish and Game, Sacramento. Admin. Rep. 86-1. 112pp.